

Appl. No. 10/751,722
Amdt. Dated July 7, 2006
Reply to Final Office Action of May 10, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A reversible ratchet-type wrench comprising:
 - a handle having a head extended from the handle and a web between said handle and the head; wherein the head has a hole in communication with a cavity in the web;
 - a compartment disposed in the web and having a first end in communication with the cavity and a second end in communication with an outside surface of the web;
 - a drive member rotatably mounted in the hole of the head, said drive member including a plurality of teeth formed on an outer periphery thereof;
 - a sliding pawl mounted in the cavity and including a first side with a plurality of ratchet teeth and a second side with a recess, the pawl further including a wall defining the recess and including a first wall portion and a second wall portion spaced apart from the first wall portion;
 - a switch member including a turn-piece for manual operation and an actuating plate extended from the turn-piece and pivotably received in the second end of said compartment, wherein the actuating plate has a receptacle facing the recess in said pawl, said switch member being movable between two positions for sliding said pawl between a first location and a second location so as to change ratcheting direction of the drive member;
 - a biasing means engaged between the receptacle in said switch member and the recess in said pawl, said biasing means operable to urge the ratchet teeth of said pawl into engagement with the teeth of said drive member, the biasing means alternating between bearing on the first wall portion and the second wall portion; and
 - wherein said switch member has a first position where, upon counterclockwise rotation of said handle, said pawl engages a first portion of a wall defining said cavity and said drive member so as to prevent relative rotation between said drive member and said handle, and upon clockwise rotation of said handle, said pawl disengages said drive member and compresses said biasing means in a manner that changes the location of the center of said pawl relative to said drive member.
2. (previously presented) The wrench of claim 1 wherein said switch member has a second position whereupon clockwise rotation of said handle, said pawl engages a second portion of a wall defining said cavity and said drive member so as to prevent relative rotation between said drive

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member and said handle, and upon counterclockwise rotation of said handle, said pawl disengages said drive member and compresses said biasing means in a manner that changes the location of the center of said pawl relative to said drive member.

3.-4. (Cancelled)

5. (Original) The wrench of claim 1 wherein said biasing means comprises an elongate member and an elastic member.

6. (Original) The wrench of claim 5 wherein the elastic member is at least partially disposed within the elongate member.

7. (Currently amended) The wrench of claim 5 wherein the elongate member has a first end engaged with the wall defining the recess in said pawl and a second end engaged with the receptacle in said switch member, wherein said pawl is operable to rotate about the first end of said elongate member.

8. (previously presented) The wrench of claim 1 wherein the second side of said pawl is curved and is operable to engage a curved wall of said cavity.

9. (Currently amended) A reversible ratcheting mechanism comprising:
a housing having an upper face and a lower face with a circular hole extending from the upper face through the lower face, a circular compartment extending from the upper face, and a cavity connecting the circular compartment to the circular hole; wherein a central axis of the circular hole is parallel to a central axis of the circular compartment;

a drive member rotatably mounted in the circular hole, said drive member including a plurality of teeth formed on an outer periphery thereof;

a sliding pawl mounted in the cavity, said sliding pawl including a first side with a plurality of ratchet teeth and a second side with a recess, ~~wherein the recess has a first end and a second end, the pawl further including a wall defining the recess and including a first wall portion and a second wall portion spaced apart from the first wall portion;~~

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a switch member including a turn-piece for manual operation and an actuating plate extended from the turn-piece and rotatably received in the compartment, wherein the actuating plate has a receptacle facing the recess in said pawl;

a biasing means having an elongate member, with a first end extending into the cavity and engaging the wall of the recess of said pawl and a second end disposed within the receptacle of said switch member, and an elastic member operable to urge the elongate member into the recess of said pawl such that the ratchet teeth of said pawl engage the teeth of said drive member, the first end alternating between bearing on the first wall portion and the second wall portion;

said switch member being rotatably switchable between a first position and a second position for sliding said pawl between a first location and a second location so as to change ratcheting direction of the drive member; wherein the first position has a clockwise ratcheting direction and a counterclockwise free rotation direction and the second position has a counterclockwise ratcheting direction and a clockwise free rotation direction; and said switch member being movable between two positions

wherein when the pawl is in the first location, the center of the pawl is located in a different location than the center of the pawl when the pawl is located in the second location, and wherein counterclockwise free rotation biases said switch member to the first position and clockwise free rotation biases said switch member to the second position.

10. (Original) The mechanism of claim 9 wherein said switch member has a second position whereupon clockwise rotation of said handle, said pawl engages said cavity and said drive member so as to prevent relative rotation between said drive member and said handle, and upon counterclockwise rotation of said handle, said pawl disengages said drive member and compresses said biasing means in a manner that urges said switching member to the second position.

11.-12. (Cancelled)

13. (Original) The mechanism of claim 9 wherein said biasing means comprises an elongate member and an elastic member.

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14. (Original) The mechanism of claim 13 wherein the elastic member is at least partially disposed within the elongate member.

15. (Currently amended) The mechanism of claim 13 wherein the elongate member has a first end operable to engage the wall defining the recess in said pawl and a second end operable to engage the receptacle in said switch member, wherein said pawl is operable to rotate about the first end of said elongate member.

16. (previously presented) The mechanism of claim 9 wherein the second side of said pawl is curved and is operable to engage a curved wall of said cavity.

17. (New) The mechanism of claim 1 wherein the wall defining the recess includes a third wall portion intermediate the first wall portion and the second wall portion, and wherein a distance between the third wall portion and a center of the recess is smaller than that between the center of the recess and each of the first wall portion and the second wall portion.

18. (New) The mechanism of claim 9 wherein the wall defining the recess includes a third wall portion intermediate the first wall portion and the second wall portion, and wherein a distance between the third wall portion and a center of the recess is smaller than that between the center of the recess and each of the first wall portion and the second wall portion.